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EXAMINER

MANNING, JOHN

ART UNIT PAPER NUMBER

2614

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/751,159	Applicant(s) KAPLAN ET AL.	
	Examiner John Manning	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Appeal Brief

In light of the arguments presented in the Appeal Brief of October 3, 2005, the following new grounds of rejection have been made.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 10-15 and 19-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Eldering (US Pat App Pub No 2005/0193410).

In regard to claim 1, Eldering discloses "targeted advertising system based on subgroups. Different subgroups are formed based on one or more subscriber characteristics, and different targeted advertisements transmitted to the different subgroups. In the Internet-environment, the subgroups are formed by utilizing multicast addresses. In cable-based and satellite-based systems, the subgroups are formed by node configurations. The targeted advertisements are inserted in the program streams at a centralized distribution point such as a router or a cable television head-end" (Abstract). The claimed step of "transmitting one or more program streams from a head end node to one or more egress nodes via the switched network" is met by Figure 4, Item 306. "In the cable systems and satellite-based systems, the subgroups may be created by utilizing the existing configuration of cable networks. As an example, in a

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cable television system, the subscribers associated with a node may be considered to form a subgroup. As illustrated in FIG. 4, in a traditional cable-based network 300, a regional head end 302 is coupled to one or more local ends 304. Each local end 304 serves one or more nodes 306. Each node 306 serves one or more set-tops 308, and each set-top 308 in turn may serve one or more television sets 310. In general, the viewers of the information transmitted to the television sets are the subscribers" (Paragraph 0041). The claimed step of "inserting one or more advertisements into the one or more program streams at the one or more egress nodes for delivery to individual subscribers such that a particular subscriber receives a program stream with an advertisement that corresponds to demographic characteristics of that particular subscriber" is met by Figures 4-5, Items 304 and 306. "FIG. 5 illustrates an exemplary process of inserting target advertisements at a centralized point. FIG. 5 is particularly applicable in an Internet environment. As shown in FIG. 5, there exists a plurality of target advertisements 502 that may have been received from many different advertisement servers 504. At a centralized point 506, these target advertisements are inserted into one or more actual program streams 508 to form a plurality of presentation streams (PS1-PS3). Each presentation stream contains a different target advertisement. For exemplary purposes, it is shown that a sender 510 routes a first presentation stream (PS1) via one or more routers 512 to a first receiver, labeled Receiver 1. The second presentation stream (PS2) is being routed via another router to Receiver 2. The third presentation stream 3 (PS3) is routed via the use of yet another router to Receivers 3 and 4. Additional routers may be used to form different subgroups and for the

transmission of the advertisements to these subgroups" (Paragraph 0051; Also see: Paragraphs 0033, 0037, 0042 and 0050).

In regard to claim 2, Eldering discloses the claimed step of "inserting splice points in the one or more program streams at the head end node". "Two different types of splice points may be defined: Out Points and In Points. In Points are places in the bit streams where it is safe to enter and start decoding that bit stream. Out points are places where it is safe to exit the bit stream. Out Points and In Points are imaginary points in the bit stream located between two transport stream packets. An Out Point and an In Point may be co-located, that is, a single packet boundary may serve as both a safe place to leave a bit stream and a safe place to enter it" (Paragraph 0065).

In regard to claim 3, Eldering discloses the claimed step of "inserting one or more advertisements comprises splicing an advertising stream with a program stream, wherein the advertising stream includes the one or more advertisements". "To enable the inserting of different advertisements in compressed program streams, different advertising breaks or splice points are identified. Splice points in a compressed program stream provide opportunities to switch from one program to another. They indicate a safe place to switch, a place in the bit stream, where a switch can be made, and result in good visual and audio quality. They are analogous to the vertical (blanking) interval used to switch uncompressed video. Unlike uncompressed video, frame boundaries in an MPEG-2 bit stream are not evenly spaced. Therefore, the syntax of the transport packet itself is used to convey where these splice points may occur" (Paragraph 0061).

In regard to claim 4, the claimed steps of “responsive to a command to begin splicing, identifying a splice point in the advertising stream”, “buffering frames after the splice point in the advertising stream”, “identifying a splice point in the program stream”, “switching to the advertising stream” and “outputting an ad-inserted stream that includes frames from the program stream and advertising stream, whereby the program stream and advertising stream are adaptively synchronized by aligning the splice points to enhance the quality of video transmission” are met by Figures 6A and 6B. “There exists a plurality of standards in the current technologies that provides a description of splice points and other constraints for encoding and inserting in program streams, e.g., MPEG-2 transport streams. In systems utilizing MPEG-2, the transport streams may be spliced without modifying the Packetized Elementary Stream (PES) packet payload. The systems are in compliance with existing Society of Motion Picture and Television Engineers (SMPTE) standards, e.g., SMPTE 312M-1999, and the constraints specified in the standard are applied individually to program streams within transport streams. Splicing of MPEG bit streams also requires managing buffer fullness of the decoder's buffers. When MPEG bit streams are encoded, there is an inherent buffer occupancy at every point in time. The buffer fullness corresponds to a delay, the amount of time that a byte spends in the buffer. When splicing two separately encoded bit streams, the delay at the splice point will not usually match. This mismatch in delay can cause the buffer to overflow or underflow at some time in the future. To avoid unpredictable underflows and overflows, the splicing method requires that the MPEG encoder match the delay at

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splicing points to a given value. Alternatively, the syntax of the transport packet itself may be used to convey where these splicing points may occur”(Paragraphs 0062-0064).

In regard to claim 5, it is implied that $N \times M$ ad inserted streams are created, where M represents the number of demographic groupings and N represents the unmodified streams (See Paragraph 0054-0055).

In regard to claim 11, Eldering discloses the steps of “receiving subscriber management information” and “selecting a particular advertisement based on the subscriber management information” (See paragraphs 0004, 0033 and 0048).

In regard to claim 12, the claimed limitation of an “egress node” is met by Figure 4, Items 304 and 306. The claimed limitation of “a router for receiving the one or more program streams” is met by the ring switch 118 (See Paragraph 0051). The claimed limitation of “a storage element for storing advertisements” is met by Figure 4, Item 306 and Figure 5, Item 512 (See Paragraph 0056). The claimed limitation of “a splicer element for inserting one or more of the stored advertisements into the one or more program streams for delivery to individual subscribers” is met by Figures 6A and 6B (See Paragraphs 0061). The claimed limitation of “wherein a particular subscriber receives a program stream with an advertisement that corresponds to demographic characteristics of that particular subscriber” is met by Figure 5 (See Paragraphs 0004, 0033 and 0048).

In regard to claim 13, Eldering discloses the claimed limitation of “one or more program streams include splice points and wherein the splicer element splices an

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advertising stream with a program stream, wherein the advertising stream includes one or more stored advertisements” (See Paragraphs 0061-0066).

In regard to claim 14, the claimed limitation of “a plurality of input processors”, “a plurality of data buffers, each of the plurality of data buffers coupled to a corresponding one of the plurality of input processors” and “responsive to a splice point being identified in the advertising stream, one of the plurality of data buffers stores frames after the splice point in the advertising stream, and wherein, responsive to a splice point being identified in the program stream, the at least one output processor switches to the advertising stream so that a single bitstream is provided as output that includes frames from the program stream and advertising stream” are met by Figure 6A (See Paragraphs 0063 and 0065).

In regard to claim 15, it is implied that $N \times M$ ad inserted streams are created, where M represents the number of demographic groupings and N represents the unmodified streams (See Paragraph 0054-0055).

In regard to claim 19, Eldering discloses “the service management system provides subscriber management information to the egress node and, responsive to the subscriber management information, the egress node selects and retrieves a particular advertisement from the storage element based on the subscriber management information” (See Paragraphs 0004, 0033 and 0048).

In regard to claim 20, the claimed limitation of “a head end node for transmitting one or more program streams via the switched network” Figure 4, Item 302. The claimed limitation of “at least one egress node for receiving the one or more program

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streams, the egress node including a splicer element for inserting one or more advertisements into the one or more program streams at the egress node for delivery to individual subscribers” is met by Figures 4 and 5, Items 306 and 304 (See Paragraphs 0051 and 0061-0066).

In regard to claim 21, the claimed limitations of “an encoder for receiving and encoding the program streams”, “an encapsulator for converting the encoded program streams into a format for transmission via the switched communication network” and “a service management system in communication with the encoder, the encapsulator and the switched communication network for provisioning and managing distribution of video and demographically-targeted advertising” is met by Figure 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eldering.

In regard to claim 22, Eldering fails to explicitly disclose that the head end node comprises a storage element for encoded program streams for time-delay delivery. However, the examiner takes OFFICIAL NOTICE that it is notoriously well known in the art to have a storage element at the head end for encoded program streams for time-delay delivery as for the case of video-on-demand for increased functionality.

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Consequently, it would have been obvious to one of ordinary skill in the art to modify Eldering with a storage element for encoded program streams for time-delay delivery for the stated advantage.

Claims 6-9 and 16-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Eldering in view of Bigham et al. (US Pat No 5,544,161).

In regard to claim 6, Eldering fails to explicitly disclose that the distributed packets are over an ATM-based network. Bigham teaches the use of an ATM-based network so as to provide a network with "broad-bandwidth, low delay, packet-like switching and multiplexing". Consequently, it would have been obvious to one of ordinary skill in the art to modify Eldering with an ATM-based network so as to provide a network with "broad-bandwidth, low delay, packet-like switching and multiplexing".

In regard to claim 7, Eldering discloses multicasting the program streams via the switched communications network (See Paragraph 0038).

In regard to claim 8, Eldering fails to explicitly disclose that the streams are transmitted to the subscriber via a DSL interface. However, the examiner takes OFFICIAL NOTICE that it is notoriously well known in the art to use a DSL interface so as to connect to a network using existing telephonic infrastructure. Consequently, it would have been obvious to one of ordinary skill in the art to modify Eldering with streams that are transmitted to the subscriber via a DSL interface so that the subscriber may connect to the network using existing telephonic infrastructure.

In regard to claim 9, Eldering fails to explicitly disclose that the streams are transmitted to the subscriber via an Ethernet interface. However, the examiner takes

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OFFICIAL NOTICE that it is notoriously well known in the art to use an Ethernet interface so as to connect to an Ethernet network. Consequently, it would have been obvious to one of ordinary skill in the art to modify Eldering with streams that are transmitted to the subscriber via an Ethernet interface so as to connect to an Ethernet network.

In regard to claim 16, t Eldering fails to explicitly disclose that the distributed packets are over an ATM-based network. Bigam teaches the use of an ATM-based network so as to provide a network with "broad-bandwidth, low delay, packet-like switching and multiplexing". Consequently, it would have been obvious to one of ordinary skill in the art to modify Eldering with an ATM-based network so as to provide a network with "broad-bandwidth, low delay, packet-like switching and multiplexing".

In regard to claim 17, Eldering discloses multicasting the program streams via the switched communications network (See Paragraph 0038).

In regard to claim 18, Eldering fails to explicitly disclose that the streams are transmitted to the subscriber via a DSL interface or Ethernet interface. However, the examiner takes OFFICIAL NOTICE that it is notoriously well known in the art to use a DSL interface so as to connect to a network using existing telephonic infrastructure or an Ethernet interface so as to connect to an Ethernet network. Consequently, it would have been obvious to one of ordinary skill in the art to modify the combination of Simonin and Wilkins with streams that are transmitted to the subscriber via either a DSL interface or Ethernet interface so that the subscriber may connect to the network using

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existing telephonic infrastructure or an Ethernet interface so as to connect to an Ethernet network.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Hoarty et al. (US Pat No 5,319,455).
- Schlack (US Par App Pub No 2002/0087975).
- Hinderks (US Par App Pub No 2001/0025377).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 571-272-7352. The examiner can normally be reached on M-F: 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JM
January 6, 2006



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